



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,524	11/15/2000	Ayad Beghdad		3620

2512 7590 06/07/2005

PERMAN & GREEN
425 POST ROAD
FAIRFIELD, CT 06824

EXAMINER

MICHALSKI, JUSTIN I

ART UNIT PAPER NUMBER

2644

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/713,524	BEGHDAD, AYAD	
	Examiner	Art Unit	
	Justin Michalski	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. Applicant is advised that should claim 7 be found allowable, claim 13 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 4-6, 9, 15, 17-19, 27, 29-31, 37, 39-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2, 15, 27, and 37 contain "the signal comprises speech". It is unclear as to what particular signal is being referring to.

Claim 4-6, 17-19, 29-31, and 39-41 contain "the level of the noise". It is unclear as to what particular level or signal is being referred to.

Claim 9 recites the limitation "the first estimation" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Pastor et al. (Hereinafter "Pastor") (US Patent 6,445,801).

Regarding Claims 1, 24, and 36 Pastor discloses a noise suppressor, communications terminal, and method of suppressing noise in a signal containing noise to provide a noise suppressed signal in which an estimate is made of the noise (Fig. 1, reference 2) and an estimate is made of speech together with some noise (reference 3), wherein the estimate of speech together with some noise is estimated to have a noise level lower than the noise level in the signal containing noise (Col. 9, line 65 through Col. 10, line 14).

Regarding Claims 2, 15, 27, and 37, Pastor further discloses the signal comprises speech (Col. 9 line 65 through Col. 10, line 14).

Regarding Claims 3, 16, 28, and 38 Pastor further discloses the level of the noise included in the estimate of the speech together with some noise is variable so as to include a desired amount of noise in the noise suppressed signal (Col. 7, lines 38-45 disclose variable coefficient α).

Regarding Claim 4, 17, 29, and 39 Pastor further discloses noise suppression in signals containing speech (i.e. context information) (Col. 1, lines 10-13).

Regarding Claims, 5, 18, 30, and 40 Pastor further discloses the level of the noise is below the mask limit of the speech and so is not audible to a listener (Col. 2, lines 49-56).

Regarding Claims 6, 19, 31, and 41 Pastor further discloses the level of noise approaches the mask limit of the speech and so some noise context information is left in the signal (Col. 12, lines 57-67).

Regarding Claims 10, 12, 20, 22, 32, 34, 42, and 44, Pastor further discloses noise reducing filters generalized and being a Wiener filter (Col. 6, lines 17-28).

Regarding Claims 11, 21, 33, and 43, Pastor further discloses a reducing factor is applied to reduce the noise level of the estimate of speech together with some noise (Fig. 2, reference 4) relative to the noise level in the signal containing noise (references 2 and 3).

Regarding Claim 8, Pastor further discloses the estimated noise is power spectral density (see abstract).

Regarding Claim 9, Pastor further discloses the first estimation (Fig. 2, reference 2) is used to update the estimated noise (reference 4).

Regarding Claim 7, 13, 23, 35, and 45 Pastor further discloses a gain coefficient is produced in which a first estimation of the gain coefficient is made adaptively (Col. 2, lines 42-46) and this first estimation is used to produce a noise estimation which is then used to produce a second estimation of the gain function (Fig. 2, reference 4).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (571)272-7524. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SINH TRAN
SUPERVISORY PATENT EXAMINER